

# PSRC and City of Bellevue Multimodal Concurrency Pilot Project

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## *A Special Report to the Joint Transportation Committee*

**July 7, 2009**

Prepared by:

**Puget Sound Regional Council**

In Consultation with:

**City of Bellevue**

**King County Metro**



# Presentation Outline

- I. Project Overview – *Robin Mayhew*
- II. Regulatory versus Planning Concurrency– *Kevin McDonald*
- III. City of Bellevue: Local Planning Context – *Kevin McDonald*
- IV. Technical Approach – *Jeff Frkonja*
- V. Key Findings and Potential Next Steps – *Robin Mayhew*
- VI. Discussion - All

# Definitions

- **Regulatory Concurrency** –
  - Required by GMA
  - Short-term process to determine if trips from a proposed development will exceed LOS standards
- **Planning Concurrency** –
  - Long-range planning
  - Compares forecasted population and employment growth to the capacity of a planned multimodal transportation network
  - If a gap is found, an action scenario is developed that outlines multimodal improvements necessary to close that gap
- **Multimodal Concurrency** –
  - A Regulatory or Planning Concurrency process that incorporates considerations for all modes of transportation

# GMA - Transportation Planning Process

## RCW36.70A.070(6)

- Requires local jurisdictions to:
  - Identify land-use assumptions providing the basis for the transportation plan
  - Adopt level-of-service standards for roadways and transit service
  - Determine long-term population and employment growth and estimate associated travel demand
  - Identify infrastructure improvements necessary to accommodate future travel demand
  - Identify multimodal strategies to address gaps in ability of planned transportation network to accommodate estimated travel demand
- GMA also requires a financial plan for the transportation element. If funding falls short of meeting adopted roadway and transit level-of-service standards the jurisdiction is required to reevaluate its land-use assumptions.

# GMA Concurrency Requirement

## RCW 36.70A.070 (6)(b)

- After comprehensive plans are adopted, requires local jurisdictions to:
  - “Adopt and enforce ordinances which prohibit development approval if the development causes the level-of-service (LOS) on a locally owned transportation facility to decline below the standards adopted in the transportation element of the comprehensive plan, unless transportation improvements or strategies to accommodate the impacts of development are made concurrent (built or funded within 6 years) with the development.”
  - Strategies may include:
    - Increased public transportation service
    - Demand management, including ridesharing programs
    - Transportation systems management strategies

# Concerns with Existing Concurrency Practice

- Lowering LOS standards can allow development to proceed regardless of impact on congestion
- Does not consider development impacts on state highways and adopted transit LOS standards
- Existing process does not recognize or measure capacity provided by:
  - Transit
  - Rideshare (Carpool or Vanpool)
  - Bicycle or pedestrian facilities

# 2005 Modification to RTPO legislation

## RCW 47.80.030 (1) (f)

- “Sets forth a proposed regional transportation approach, including capital investments, service improvements, programs, and transportation demand management measures to guide the development of the integrated, multimodal regional transportation system. **For regional growth centers, the approach must address transportation concurrency strategies required under RCW 36.70A.070 and include a measurement of vehicle level of service for off-peak periods and total multimodal capacity for peak periods**”
  - Requires RTPO’s to address Concurrency within regional growth centers in regional transportation plan update
  - Includes vehicle-oriented measures off-peak and multimodal during peak periods
  - Applies to 27 PSRC regional growth centers

# Multimodal Concurrency Pilot Project

## 2008 “Legislative Proviso:

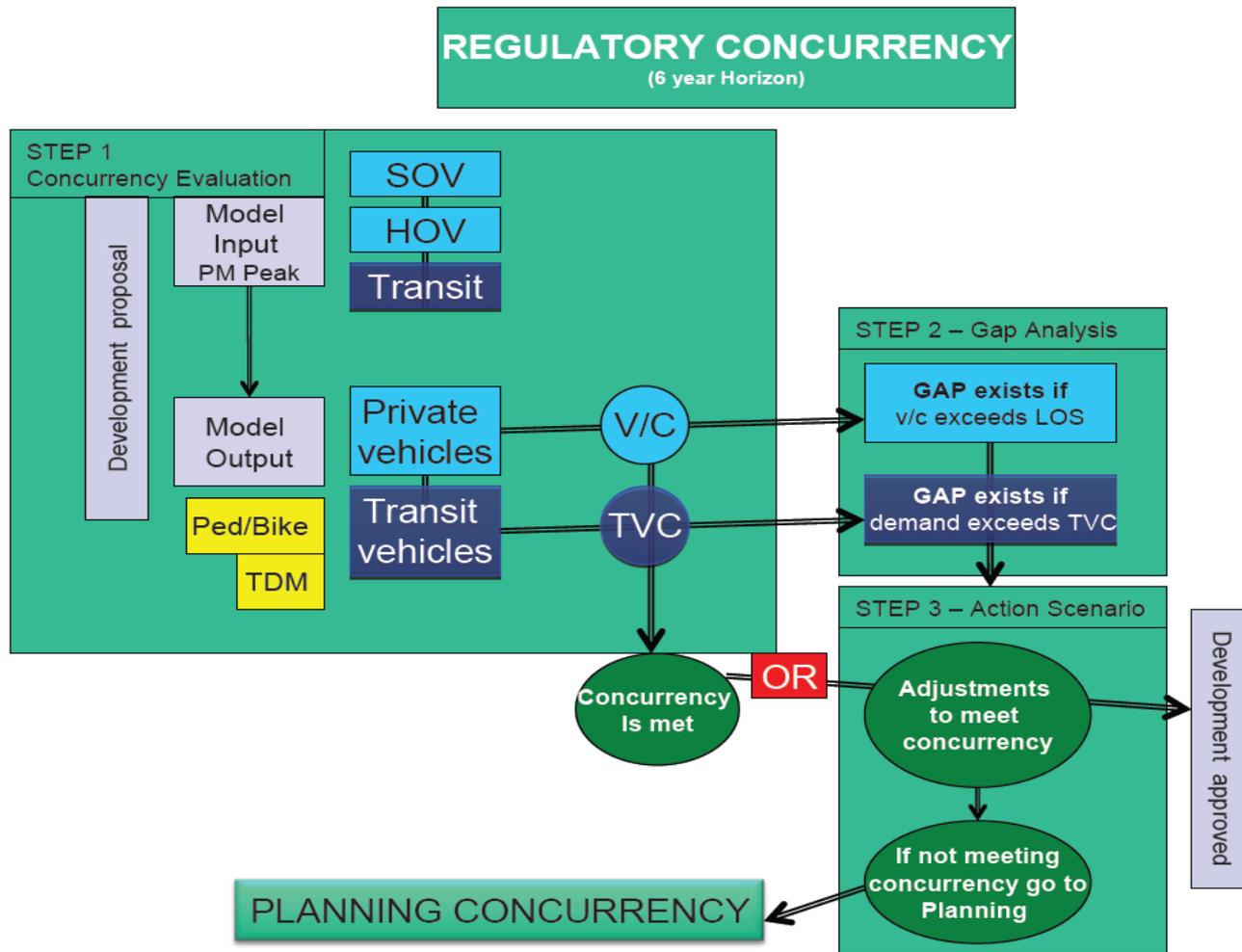
“This pilot program will analyze total trip needs for a regional growth center based on adopted land use plans, identify the number of trips which can be accommodated by planned roadway, transit service, and nonmotorized investments, and identify gaps for trips that cannot be served and strategies to fill those gaps. The purpose of this pilot is to demonstrate how this type of multimodal concurrency analysis can be used to broaden and strengthen local concurrency programs”

In response, PSRC collaborated with the City of Bellevue and King County Metro

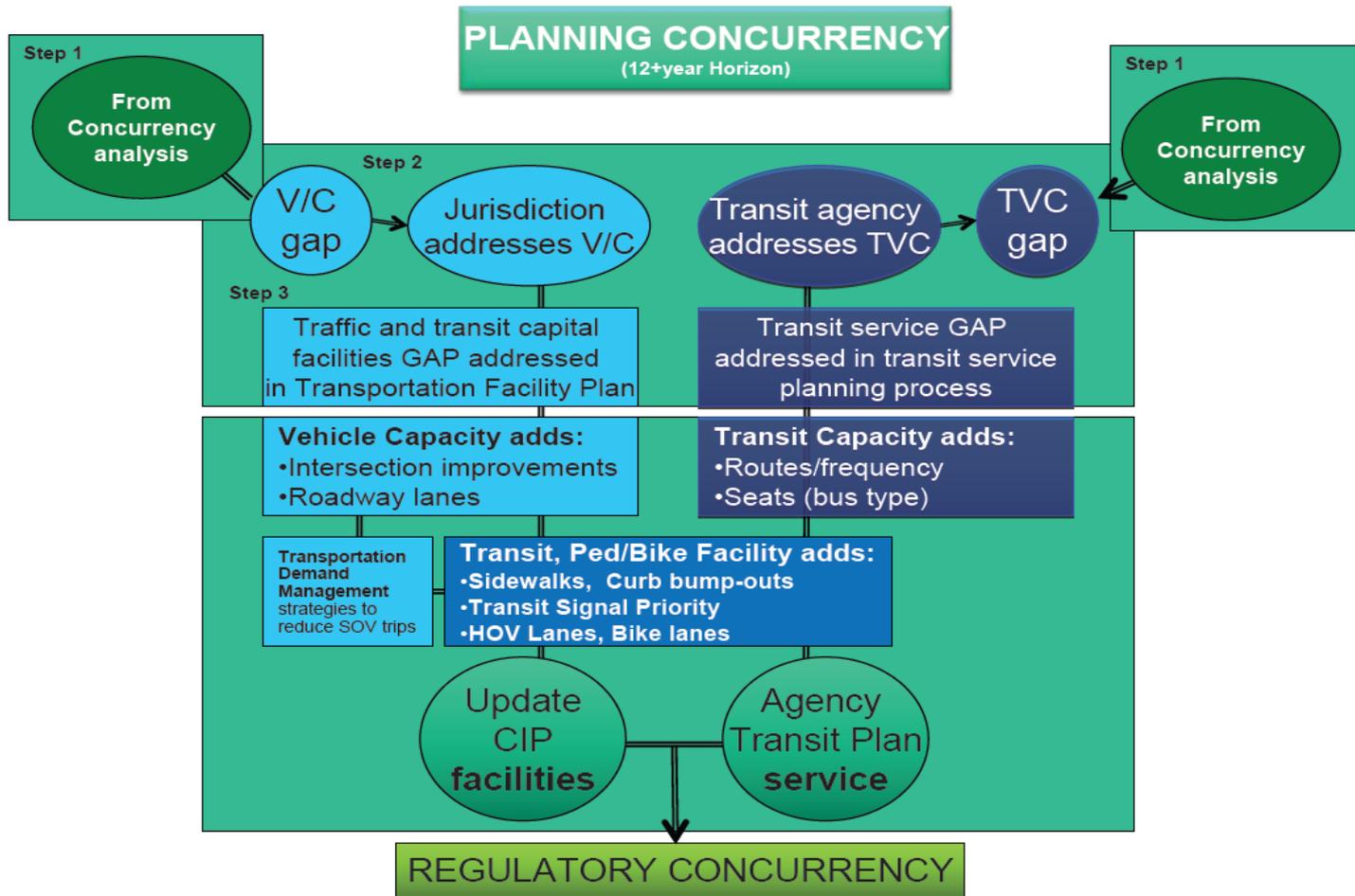
## 2009 Multimodal Concurrency Pilot Project Key Elements:

- Establish a technical approach “template”
- Conduct a pilot demonstration using the “template”
- Conduct market-driven transit planning
- Examine potential impacts of TDM and non-motorized investments
- Collaborate with local jurisdictions and transit operators
- Document institutional issues
- Identity potential next steps

# Regulatory Versus Planning Concurrency



# Regulatory Versus Planning Concurrency



# Downtown Bellevue: Local Planning Context

- Planned growth in Downtown Bellevue important to Central Puget Sound growth management strategy
- Downtown Bellevue identified as an urban center- a place to focus regional growth to reduce sprawl and retain open space
- Dramatic growth in employment and housing
  - Current: 36,000 employees and 5,000 residents
  - 2020 forecast: 63,000 employees and 11,000 residents



# Downtown Bellevue: Local Planning Context

- **Significant investments in roads, transit and non-motorized facilities to support planned growth**
  - Downtown Bellevue is mobile
  - Transit daily mode share: 19% and growing
  - Downtown Bellevue is becoming more walkable and bikeable
- **Transportation solutions focused on transit and non-motorized modes rather than on autos**



# Downtown Bellevue: Local Planning Context

- **As currently managed in Bellevue, concurrency relies on roadway capacity**
  - City established Level of Service (LOS)
    - Quantified as the volume/capacity of intersections
  - City controls roadways
  - City funds infrastructure projects
  - City permits development projects
- **Future Downtown mobility will rely on transit, pedestrians and bicycles**
  - Wider streets are not a desirable option
  - Yet to avoid a concurrency violation today, wider streets are the only solution...or deny a building permit

# Downtown Bellevue: Local Planning Context

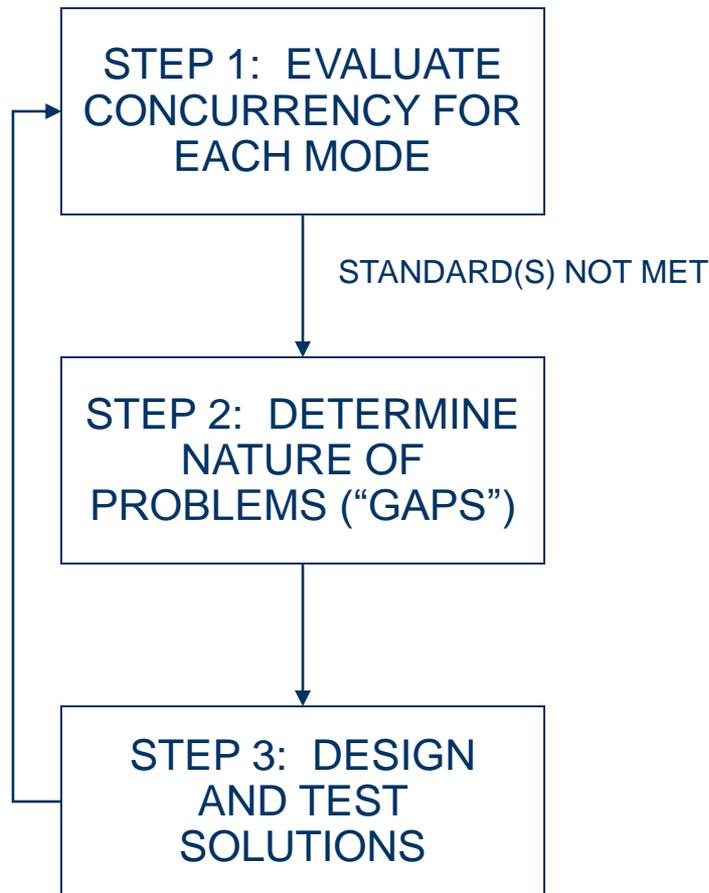
- **Need a concurrency measure that acknowledges and quantifies transit and non-motorized trips**
  - City does not fund or control transit service
  - City can partner with transit agencies to provide infrastructure to help with speed and reliability
- **Quantifying transit trips**
  - Seating capacity
  - Frequency of service
  - Translate to passenger carrying capacity
- **Quantifying pedestrian and bicycle trips**
  - Sidewalks and bike facilities can translate to a greater non-motorized mode share
  - Hard to quantify with existing tools



# Technical Approach--Overview

Long range planning focus: How can future growth within centers be adequately served by all modes (while recognizing the need to translate the long term approach into an approach that can be used for “Regulatory Concurrency”)

# Technical Approach--Overview



## Concurrency Metrics:

- Roadway
- Transit
- Bicycle
- Pedestrian

## Problem Statements:

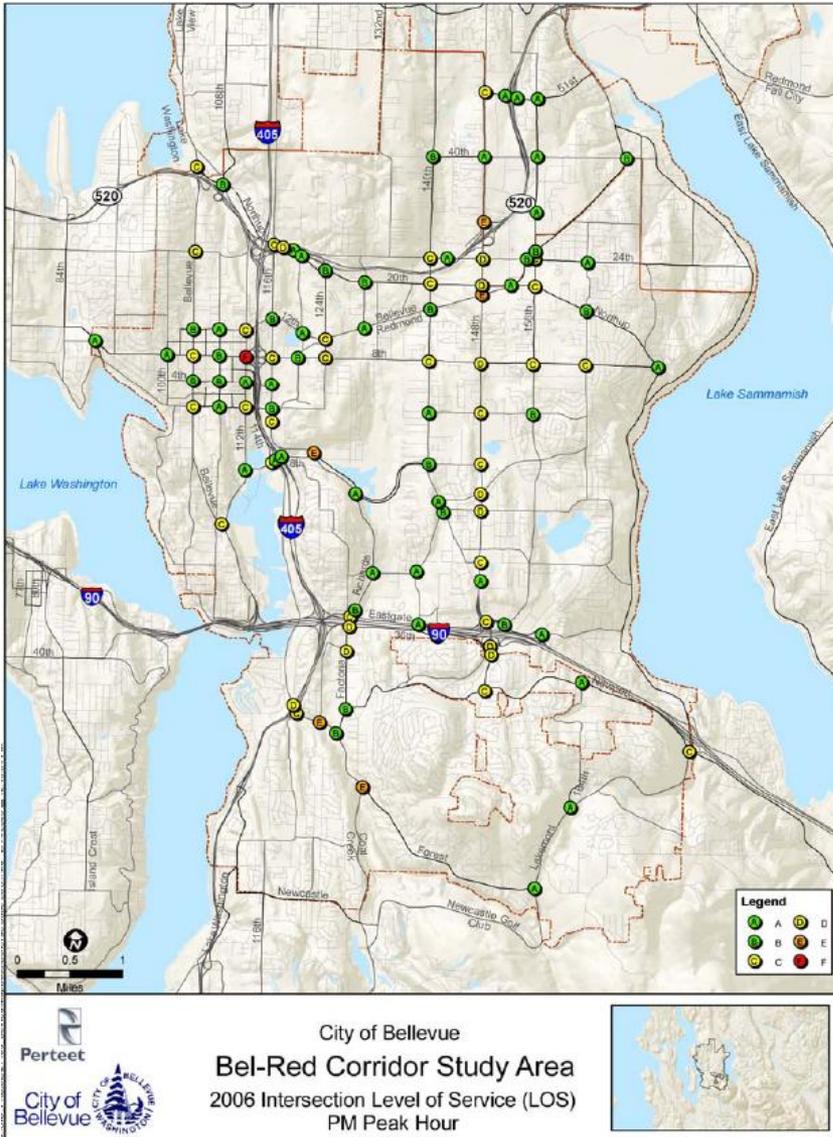
- Roadway → Person-Trip Gap
- Transit → Person-Trip Gap
- Bicycle → Facility Gap
- Pedestrian → Facility Gap

## Potential Strategies:

- Transit Investments
- Demand Management Programs
- Pricing
- Bike/Ped Investments
- Roadway Investments (efficiency and/or capacity)

# Evaluation Metric: Roadway

- Intersection Level-of-Service (LOS)



# Evaluation Metrics: Transit

## Transit Capacity and Level-of-Service composite metric

Metric	Purpose
Load Factor (riders/seats)	Measure capacity
Headway	Measure attractiveness/LOS that transit agencies can affect
Speed	Measure attractiveness/LOS that city efforts can affect
Reliability	
Service Coverage	Measure accessibility

# Evaluation Metrics: Bicycle

- System Accessibility

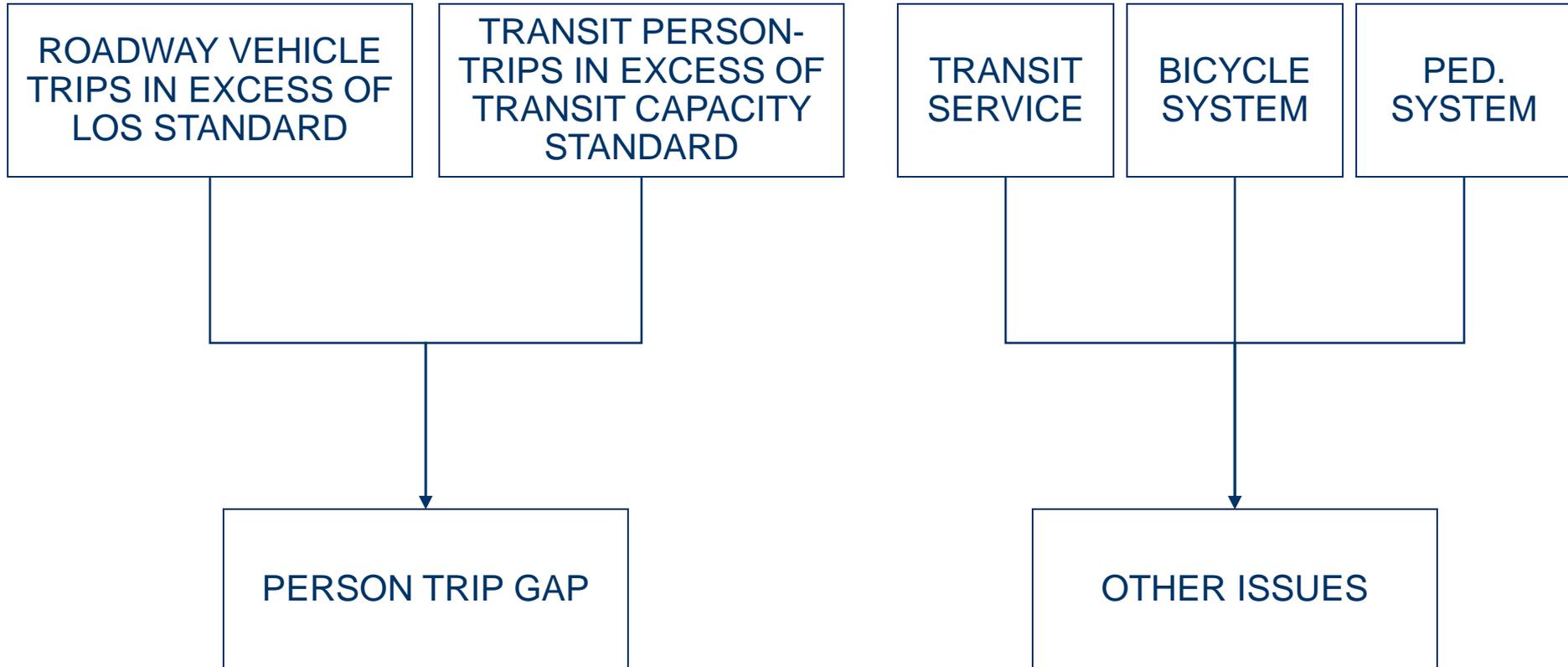
Metric	Purpose
Off-road facility coverage	Measure accessibility to dedicated bicycle facilities within study area (area accessible to off-road facilities relative to total area)
On-road facility coverage	Measure coverage of roadway system with bicycle support (centerline miles with amenities relative to total centerline miles)

# Evaluation Metric: Pedestrian

- System Accessibility

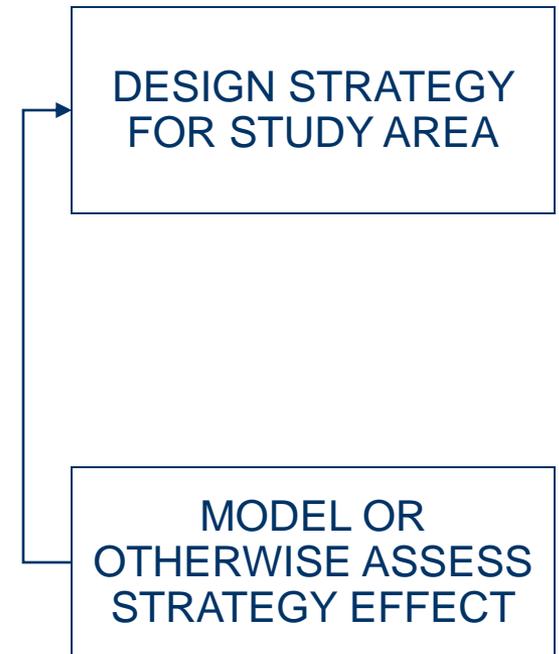
Metric	Purpose
Sidewalk Coverage	Measure sidewalk availability (as ratio of block faces with sidewalks to total block faces in study area)
Walkable Intersection Density	Measure availability of pedestrian paths (walkable intersections per unit area relative to total intersections per unit area)

# Problem/Gap Analysis



# Solution Design

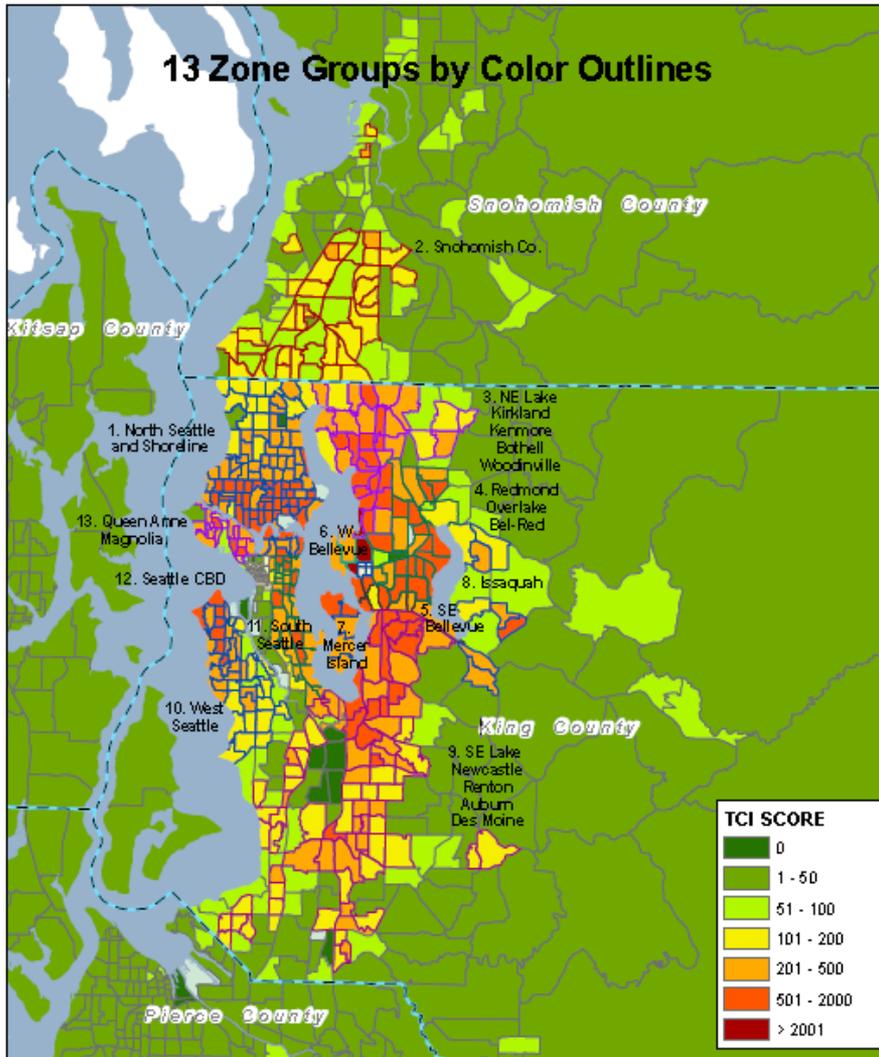
- Transportation Demand Management Strategies
  - Vanpool program expansion
  - Commute Trip Reduction program expansion
  - Pricing (such as parking surcharges)
- Transit Strategies\*
  - Additional Service (existing routes)
  - New Routes or Services
- Bicycle Strategies
  - Enhance or add bicycle facilities
  - Support programs (such as secure parking, showers, etc.)
- Pedestrian Strategies
  - Enhance or add pedestrian facilities
- Roadway Strategies
  - Management enhancements
  - Transit-supportive enhancements (such as business-access/transit lanes)
  - Capacity



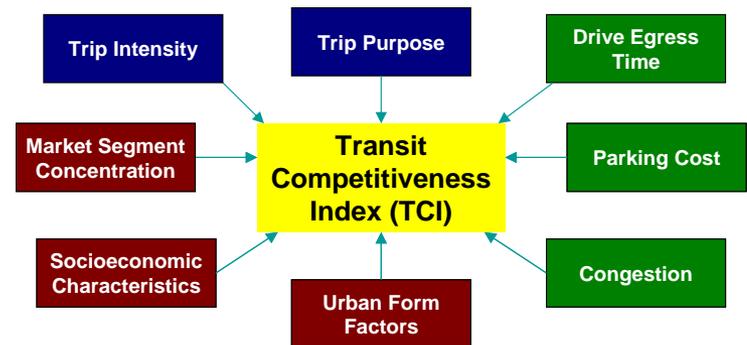
\* Informed by market and sketch analyses



# Transit Competitiveness Index & Service Planning Tools



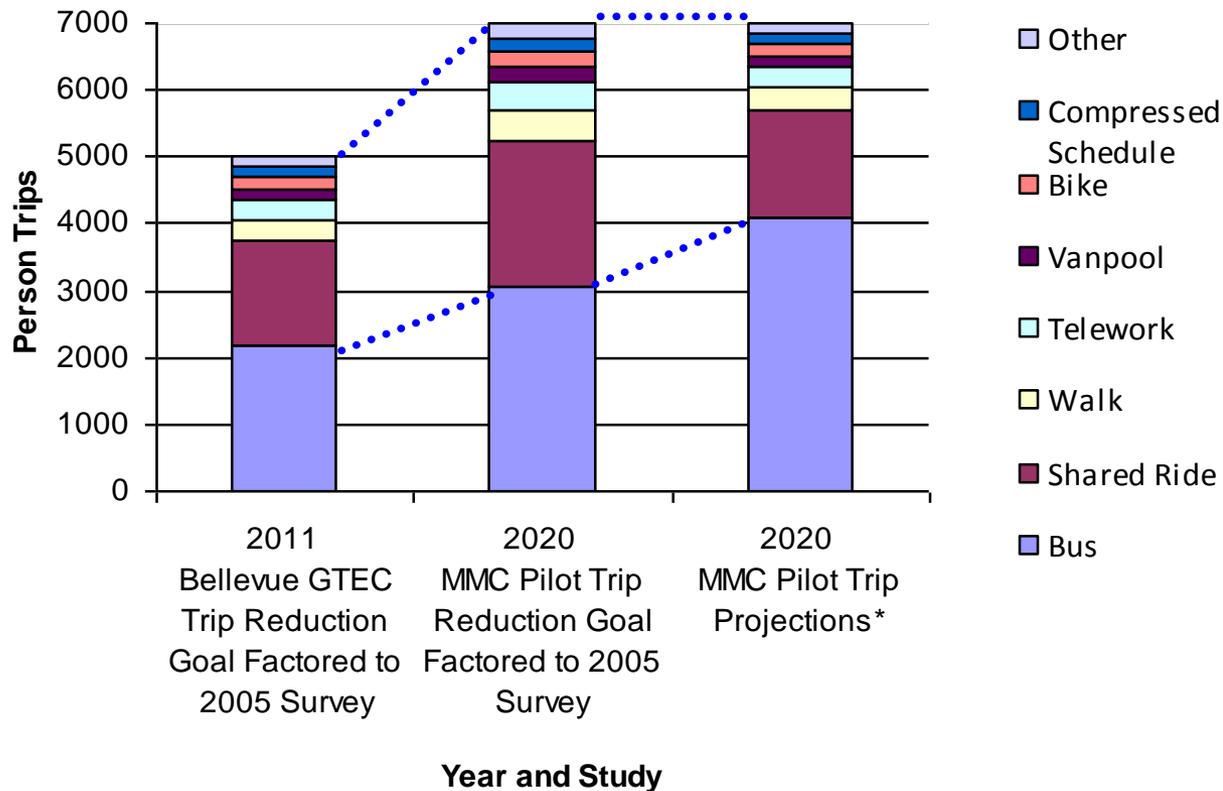
- Identify corridors where transit is a highly competitive mode (to understand markets)
- Allows user to test the LOS that would produce the highest ridership in that corridor (to understand customers).
- Based on 2006 Household Survey Results



# Technical Approach—Bellevue Pilot

## Non-Drive-Alone Trips

Bellevue Multimodal Concurrency Pilot



## Pilot Results:

- Trip-making response

\* Based both on travel demand forecast modeling and empirical information

# Technical Approach—Bellevue Pilot

## Pilot Results:

- Bicycle metrics

Metric	Base Case (Study Area)	Action Scenario (Study Area)
Off-road Facility Presence (percent of area served)	26%	98%
On-Road Facility Presence (percent of roadway with amenity)	4%	35%

\* Based both on travel demand forecast modeling and empirical information

# Key Findings

- Citizens and employers care about how the transportation system performs
- In growth centers, all modes are needed to meet travel demand.
- What's important is the use of alternative modes, not simply the capacity provided. Performing a market analysis is key to evaluating effective strategies.
- It is important to understand the transit potential when proposing new service.
- Transportation and land use planning need to be coordinated. The transportation investments should accommodate local growth.
- Transit metrics should address multiple dimensions of service and operating environment to incorporate all factors that affect transit performance.

# Potential Next Steps

- Study possible ranges of standards for transit, bike, pedestrian metrics
- Enhance Models to incorporate these modes
- Monitor developments and research in the area of TDM programs with the goal of understanding the potential impacts of specific demand management efforts
- Consolidate the legislative direction regarding how multiple modes of transportation are to be incorporated into concurrency
- Establish a legal framework to ensure roadway and transit level-of-service standards in local comprehensive plans are coordinated with transit agency short- and long-range planning

# Potential Next Steps

- Incorporate a cost/benefit analysis in the planning-level multimodal concurrency analysis
- Establish a multimodal concurrency approach in concert with a regionally coordinated and locally implemented set of planning principles that support the context for its implementation
- The PSRC should pursue resources to support a new element in its Work Program to explore the implementation of this pilot methodology in ways that support Vision 2040

# PSRC and City of Bellevue Multimodal Concurrency Pilot Project

## Discussion

# PSRC and City of Bellevue Multimodal Concurrency Pilot Project

## Access to the Report:

[www.psrc.org](http://www.psrc.org)

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